

### **REMARKS**

Upon entry of this Amendment, claims 13, 14, and 16-26 are pending and under current examination. For the reasons presented herein, Applicants traverse the rejections set forth in the Office Action<sup>1</sup>, wherein the Examiner:

(a) rejected claims 13-20 under 35 U.S.C. § 103(a) as being unpatentable over WO 00/00868 ("Chou") in view of Mattox, *Handbook of Deposition Technologies...*, Chapter 3 ("Mattox") and Jaszewski et al., *Microelectronic Engineering* 35 (1997) 381-384 ("Jaszewski");

(b) rejected claims 21, 22, 25, and 27 under 35 U.S.C. § 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as being unpatentable over Chou; and

(c) rejected claims 23, 24, and 26 under 35 U.S.C. § 103(a) as being unpatentable over Chou in view of U.S. Patent No. 6,380,101 ("Breen").

#### **Specification and Claim Amendments:**

Applicants have amended claims 13 and 21 to include the elements of now cancelled claims 15 and 27, respectively. Applicants have cancelled claim 28 without prejudice or disclaimer of its subject matter, and amended claims 20 and 26 to improve form.

Applicants have amended the specification to conform to the claim amendments, and to correct typographical errors. No new matter has been introduced.

#### **Rejection of Claims 13-20 under 35 U.S.C. § 103(a):**

Applicants request reconsideration and withdrawal of the rejection of claims 13-20 under 35 U.S.C. § 103(a) as being unpatentable over Chou in view of Mattox and Jaszewski. Claim 15 has been cancelled and its subject matter incorporated into claim 13, so claim 15 will be addressed vis-à-vis the subject matter of this claim.

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<sup>1</sup> The Office Action contains statements characterizing the related art and the claims. Regardless of whether any such statements are specifically identified herein, Applicants decline to automatically subscribe to any statements in the Office Action.

The Examiner's arguments do not provide an appropriate supporting rationale to support his conclusion of obviousness regarding at least independent claims 13 and 21 in light of the decision by the Supreme Court in *KSR Int'l. Co. v. Teleflex Inc.*, 550 U.S. \_\_\_, 82 USPQ2d 1385 (2007) that would enable "prompt resolution of issues pertinent to patentability." See M.P.E.P. § 2141, 8th Ed., Rev. 6 (Sept. 2007), pp. 2100-115 and 2100-117.

It appears that the Examiner attempted to rely on a rationale that there exists "[s]ome teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention." M.P.E.P. § 2143. See also M.P.E.P. § 2143(G). The Examiner improperly applied this rationale, at least because the alleged motivation to combine Chou with any of Mattox, Jaszewski, or Breen<sup>2</sup> is based on mere conclusory statements, e.g., "since [they] all pertain to construction of layers" (Office Action, p. 4), and on an incorrect characterization of the cited references.

Applicants note that "rejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." M.P.E.P. § 2143.01(IV) (citations to *KSR* and *In re Kahn* omitted). The Examiner's conclusory statements in support of the combination of Chou with any of Mattox, Jaszewski, or Breen, along with the incorrect characterization of these references, undermines the Examiner's allegations and clearly demonstrate nonobviousness of the claimed invention.

None of the cited references, whether taken alone or in combination, teaches or suggests at least each and every element of Applicants' independent claims. Moreover, one of ordinary

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<sup>2</sup> Cited in the body of the rejection only, as a 'background' reference.

skill in the art at the time of the present invention would not have been motivated to modify one or more of the cited references to produce the claimed invention.

The Examiner acknowledges that “Chou fails to specifically teach the process of applying the metal layer, oxidizing the layer of metal to form an oxide film and then applying the reagent on the oxide film.” Office Action, p. 4. The Examiner then cites Mattox, Jaszewski, and Breen and alleges “[i]t would have been obvious ... to modify Chou with the formation of the metal layer as taught by Mattox as one means of depositing a metal and oxidizing a metal layer, and the application of the anti-adhesive film onto a surface as taught by Jaszewski for application of the thin film layer.” *Id.* According to the Examiner, “[o]ne would have been motivated to use Chou, Mattox, and Jaszewski, since all pertain to the construction of layers.” *Id.*

Applicants respectfully submit that the rejection should be withdrawn for a number of reasons. First, Chou does not teach or even suggest at least the claimed “depositing a layer of a metal chosen from titanium, zirconium, niobium, tantalum, and aluminium, and mixtures thereof, on the patterned surface, said metal having a stable oxidation number, oxidising the layer of metal to form a mechanically stable oxide film,” as recited in claim 13 (similar recitations in claim 21). Mattox, Jaszewski, and Breen do not cure these deficiencies in Chou.

Mattox is merely directed to surface preparation for film and coating deposition processes. See Mattox, generally. Each of the subsections of Mattox does not teach or suggest at least the above-quoted elements of claim 13 (or similar recitations in claim 21).

Jaszewski is directed to investigating the degradation of anti-adhesive properties of protective PTFE films during the hot embossing of thermoplasts. See Jaszewski, Abstract. In particular, the Examiner cited section 2.1, entitled “Polytetrafluorethylene (PTFE) films,” for an alleged teaching of “different applications such as sputtering or plasma polymeriz[ation] of the films onto a metal surface” (Office Action, p. 4). This too does not even remotely teach or

suggest at least the above-quoted elements of claim 13 (or similar recitations in claim 21). Instead, Jaszewski teaches that PTFE films were deposited on shims with random implantation of fluorinated ions on a nickel surface. See Jaszewski, p. 381, col. 2.

Finally, the Examiner cited Breen to allege that “[i]t is known in the art that the metal oxide layer can be as thin as 50 to 1000 nm.” Office Action, p. 4. Regardless of whether or not a metal film can be as thin as 50 to 1000 nm, Breen, like the other cited references, also does not even remotely teach or suggest at least the above-quoted elements of claim 13 (or similar recitations in claim 21). Instead, Breen teaches microcontact printing of self-assembled monolayers (SAMs) on indium zinc oxide (IZO) films to protect the underlying IZO films from wet chemical etching. See Breen, Abstract. In Breen’s microcontact printing, the elastomer (PDMS) stamp is inked with a solution of SAMs and then brought into conformal contact with an IZO surface. Only where the raised surfaces of the elastomeric stamp contact the IZO surface are the SAMs transferred. When the stamp is removed and the IZO surface is wet-etched, only IZO regions covered with SAMs are protected against etching. This does not constitute a teaching or suggestion of Applicants’ claim 13 (or similar recitations in claim 21).

In view of the reasoning presented above, Applicants submit that claims 13 and 21 are not obvious over Chou in view of Mattox, Jaszewski, or Breen, at least because the Examiner has not provided a clearly articulated rationale to support his allegations of obviousness, because the Examiner mischaracterized the cited references, and because the Examiner has not shown that the results of combining Chou with Mattox, Jaszewski, or Breen would have been predictable. The Examiner’s conclusory statements in support of the combination of Chou with Mattox, Jaszewski, or Breen undermines the Examiner’s allegations and clearly demonstrates nonobviousness of the claimed invention.

Independent claim 13 should therefore be allowable, along with claims 14-20 dependent therefrom. Applicants therefore respectfully request withdrawal of the 35 U.S.C. § 103(a) rejection.

**Rejection of Claims 21, 22, 25, and 27 under 35 U.S.C. § 102(b)/103(a):**

Applicants request reconsideration and withdrawal of the rejection of claims 21, 22, 25, and 27 under 35 U.S.C. § 102(b) as being anticipated by, or, in the alternative, under 35 U.S.C. § 103(a) as being unpatentable over Chou. Claim 27 has been cancelled and its subject matter incorporated into claim 21, so claim 27 will be addressed vis-à-vis the subject matter of claim 21.

First, as discussed in the previous section, Chou, taken alone or in combination with any of the other cited references, does not render obvious Applicants' independent claims 13 and 21. Therefore, Chou also does not render obvious claims 22 and 25, which depend from claim 21.

Second, Applicants challenge the Examiner's 35 U.S.C. § 102/103 combination rejection as improper and lacking merit, even without addressing the deficiencies of Chou discussed in the previous section. Applicants respectfully direct the Examiner to M.P.E.P. § 706.02(V), which states:

The distinction between rejections based on 35 U.S.C. 102 and those based on 35 U.S.C. 103 should be kept in mind. **Under the former, the claim is anticipated by the reference. No question of obviousness is present.** In other words, for anticipation under 35 U.S.C. 102, the reference must teach every aspect of the claimed invention either explicitly or impliedly. Any feature not directly taught must be inherently present. **Whereas, in a rejection based on 35 U.S.C. 103, the reference teachings must somehow be modified in order to meet the claims.** The modification must be one which would have been obvious to one of ordinary skill in the art at the time the invention was made (emphasis added).

The M.P.E.P. clearly instructs that, for a proper 35 U.S.C. § 102 rejection, "[n]o question of obviousness is present." *Id.* Therefore, if the Examiner applies a 35 U.S.C. § 102(b) rejection

of Applicants' claims based on Chou, this must necessarily preclude a 35 U.S.C. § 103(a) rejection of the same claim, based on the same reference, for the same reason.

Similarly, the M.P.E.P. clearly instructs that, for a proper 35 U.S.C. § 103 rejection, "the reference teachings must somehow be modified in order to meet the claims." *Id.* Therefore, if the Examiner applies a 35 U.S.C. § 103(a) rejection of Applicants' claims based on Chou, this must necessarily preclude a 35 U.S.C. § 102(b) rejection of the same claim, based on the same reference, for the same reason.

Thus, if the Examiner alleges that Chou meets all the claim limitations of rejected independent claim 21, for example, in a 35 U.S.C. § 102(b) rejection, then he cannot also apply a 35 U.S.C. § 103(a) rejection of the same claim -- in combination with the 35 U.S.C. § 102(b) rejection, for this necessarily admits the impropriety of the 35 U.S.C. § 102(b) rejection. Likewise, if the Examiner alleges that independent claim 21, for example, is obvious in a 35 U.S.C. § 103(a) rejection, then he cannot also apply a 35 U.S.C. § 102(b) rejection in combination with the 35 U.S.C. § 103(a) rejection, for this necessarily admits the impropriety of the 35 U.S.C. § 103(a) rejection. This is in part because a proper 35 U.S.C. § 103(a) rejection requires that "the reference teachings must somehow be *modified* in order to meet the claims." *Id.*, emphasis added.

Moreover, "[i]t is important for an examiner to properly communicate the basis for a rejection so that the issues can be identified early and the applicant can be given fair opportunity to reply." M.P.E.P. § 706.02(j). The Examiner's rejection is not properly communicated in a manner affording Applicants a fair opportunity to reply. For example, according to the Examiner, "it would have been obvious ... that any process can be used to create a structure." Office Action, p. 5. This does not provide any guidance as to the rejected claim language, for example, and does not provide an appropriate supporting rationale to support his conclusion of

obviousness regarding at least independent claim 21 in light of the decision by the Supreme Court in *KSR Int'l. Co. v. Teleflex Inc.*, 550 U.S. \_\_\_, 82 USPQ2d 1385 (2007) that would enable “prompt resolution of issues pertinent to patentability.” See M.P.E.P. § 2141. Therefore, the Examiner’s alleged 35 U.S.C. § 102/103 combination rejection is wholly improper on its face.

In summary, Applicants submit that the Examiner’s 35 U.S.C. § 102/103 combination rejection is improper and without merit, even without addressing the deficiencies of Chou. Therefore, claims 21, 22, and 25 are neither anticipated nor rendered obvious by Chou. Accordingly, Applicants respectfully request withdrawal of the rejection.

**Rejection of Claims 23, 24, and 26 under 35 U.S.C. § 103(a):**

Applicants request reconsideration and withdrawal of the rejection of claims 23, 24, and 26 under 35 U.S.C. § 103(a) as being unpatentable over Chou in view of Breen.

As discussed in this Amendment, Chou in view of Breen (or any of the other cited references) does not render obvious Applicants’ independent claims 13 and 21, at least because the references, taken alone or in combination, fail to disclose or suggest each and every element of Applicants’ claimed invention. Because Chou in view of Breen does not render obvious independent claim 21, these references also do not render obvious claims 23, 24, and 26 which depend therefrom. Applicants therefore respectfully request withdrawal of the 35 U.S.C. § 103(a) rejection of claims 23, 24, and 26.

**Conclusion:**

Applicants request reconsideration of the application and withdrawal of the rejections. Pending claims 13, 14, and 16-26 are in condition for allowance, and Applicants request a favorable action.

If there are any remaining issues or misunderstandings, Applicants request the Examiner telephone the undersigned representative to discuss them.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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